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10/806,406	03/23/2004	Michael Anthony Dean	BBNT-P01-261	2304

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EXAMINER	
ALVESTEFFER, STEPHEN D	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/806,406	DEAN, MICHAEL ANTHONY	
	Examiner	Art Unit	
	Stephen Alvesteffer	2175	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 February 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20080327*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This Office Action is responsive to the amendment filed February 5, 2008. Claims 1, 2, 4-11, 13, 14, claims 16-18 are currently amended. Claims 1, 8, 10, and 11 are independent. Claims 1-18 remain pending.

The Information Disclosure Statement (IDS) filed March 27, 2008 has been considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-11, 13, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan et al. (hereinafter Jordan), United States Patent 5,745,113, and Harnsberger et al. (hereinafter Harnsberger), United States Patent Application Publication 2004/0107118.

Regarding claim 1, Jordan teaches a computer-implemented method of displaying on a display statements having start properties and stop properties related to lifetimes of said statements (see Jordan column 11 lines 31-45; "*Task objects begin with a set of predefined properties, which may be extended by a user. The predefined properties include start and stop dates (which may include times)*"), comprising:

displaying subjects and objects of said statements as nodes (see Jordan column 9 lines 15-20; "*The term graph is used in a fully general sense to refer to any number of nodes (e.g. boxes, ovals, icons) connected by any number of lines (or arcs). Nodes may represent people, artifacts, tasks, and so on; lines indicate the relationships between or among them. Nodes and lines are both objects*"); displaying predicates of said statements as arcs connecting said nodes (see Jordan column 9 lines 15-20); and hiding said nodes and said arcs for particular ones of said statements when a selected display timeframe is outside said lifetimes of said particular ones of said statements (see Jordan column 10 lines 59-67; "*The map and relationship editors also provide for the playback of data (observations) to show their temporal aspects. In a time sequential playback, objects or relationships are placed or changed according to their properties through a selected period of time*"; see Jordan also column 11 lines 11-22; "*All displays, including those just described, may be controlled through the use of filters selecting objects for display*"). However, Jordan does not teach querying a Semantic Web resource and receiving Resource Description Framework (RDF) statements that match the query. It should be noted that the Semantic Web and RDF did not exist at the time of Jordan's invention. Harnsberger teaches the Semantic Web as well as RDF being used to express relationships between resources or content (see Harsberger paragraph [0012]; "*Most of the existing work on developing the "semantic web" has focused on finding ways to express relationships between existing resources (i.e., content). This has led to the development of the Resource Description Framework ("RDF") and the RDF Schema ("RDFS") as forms for expressing relationships and semantic metadata.*

RDF is a general framework used for describing metadata and provides interoperability between applications that exchange machine-understandable information"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Semantic Web resources and RDF statements as taught by Harnsberger to model and display the invention of Jordan to improve interoperability between applications that exchange machine-understandable information (see Harnsberger paragraph [0012]; "*RDF is a general framework used for describing metadata and provides interoperability between applications that exchange machine-understandable information*").

Regarding claim 3, Jordan/Harnsberger teaches providing tools for a user to select said timeframe (see Jordan column 3 lines 21-34; "*The system may include a time line editor for a user to draw, modify, and display a time line including display objects representing activities or events relating to workplace objects, including activities or events recorded in the database by other tools in the set of tools, and for a user to create display objects representing activities or events*")

Regarding claim 4, Jordan/Harnsberger teaches that said tools include providing said user with an option to select a start timeframe corresponding to an earliest one of said start properties of said RDF statements (see Jordan column 11 lines 31-45; "*Task objects begin with a set of predefined properties, which may be extended by a user. The predefined properties include start and stop dates (which may include times)*").

Regarding claim 5, Jordan/Harnsberger teaches that said tools include providing said user with an option to select an end timeframe corresponding to a latest one of said stop properties of said RDF statements (see Jordan column 11 lines 31-45; "*Task objects begin with a set of predefined properties, which may be extended by a user. The predefined properties include start and stop dates (which may include times)*").

Regarding claim 6, Jordan/Harnsberger teaches that said tools include providing said user with an option to select at least one timeframe increment for displaying said statements in temporal order corresponding to said start properties and said stop properties of said RDF statements (see Jordan column 10 line 58 through column 11 line 4; "*The style of playback may be continuous (if data was collected continuously), interpolated (to create a continuous appearance), or discrete*", "continuous" and "discrete" are two timeframe increments of playback).

Regarding claim 7, Jordan/Harnsberger teaches labeling each of said nodes with a value of a literal property of said node dependent on said start property and said stop property of said RDF statement associated with said node (see Jordan column 7 lines 19-35; "*Through dialog boxes, the user selects an existing or new object, edits how it is displayed on a map, edits the icon used for it on palette buttons, specifies the types of record in the database that objects of the type can point to, renames it, or removes it*", objects may be renamed using the relationship editor; see also Jordan column 11 lines 31-45; "*The predefined properties include start and stop dates (which may include times), resources required (such as people or equipment), and task*

dependencies (on which tasks, if any, does this one may depend). Through the resources and other properties, task objects may be linked to the objects of other tools, including map objects and relationship objects", relationship objects may be linked to task objects that have a associated start and stop times).

Regarding claim 8, Jordan/Harnsberger teaches a system for displaying graphical representations of time varying information for RDF statements (see Jordan column 11 lines 31-45; "*Task objects begin with a set of predefined properties, which may be extended by a user. The predefined properties include start and stop dates (which may include times)*"; see also Harsberger paragraph [0012]; "*Most of the existing work on developing the "semantic web" has focused on finding ways to express relationships between existing resources (i.e., content). This has led to the development of the Resource Description Framework ("RDF") and the RDF Schema ("RDFS") as forms for expressing relationships and semantic metadata. RDF is a general framework used for describing metadata and provides interoperability between applications that exchange machine-understandable information*"), comprising: a processor connected to at least one Semantic Web resource and receiving input from a user, said input including a query to retrieve selected ones of said RDF statements matching said query (see Jordan column 8 lines 15-36; "*A user may create, modify, and query the database records. Some fields and records contain information generated by graphical interface operations, such as the placement or moving of an object, and are created implicitly and normally hidden from the user in the database interface display. Database records associated with an object are accessible through database commands in the system*

menu or through a hypertext-like link that appears when a displayed object is opened"); at least one application program interface (API) determining said selected ones of said RDF statements from said at least one Semantic Web structured resource, said API obtaining start and stop properties for subjects, objects, and RDF statements of said selected ones of said matching RDF statements, said API determining graphical representation data from said selected ones of said RDF statements and said properties, said start and stop properties defining lifetimes of said RDF statements (see Jordan column 11 lines 31-52; "*Task objects begin with a set of predefined properties, which may be extended by a user. The predefined properties include start and stop dates (which may include times)… In the task time line window 92, the system provides for a user to view the information presented in the task diagram in the form of a time line*"; see also Harnsberger paragraph [0026]; "*web service which will use the device's API to export data for other uses*"); and a display connected to said processor, said processor receiving said graphical representation data from said at least one API and controlling said display to present graphical representations of said selected ones of said RDF statements said input from said user including a timeframe, said processor controlling said display to hide said graphical representations of determined ones of said RDF statements when said timeframe is outside said lifetimes of said determined ones of said RDF statements (see Jordan column 10 lines 59-67; "*The map and relationship editors also provide for the playback of data (observations) to show their temporal aspects. In a time sequential playback, objects or relationships are placed or changed according to their properties through a selected period of time*"; see also

column 11 lines 11-22; "*All displays, including those just described, may be controlled through the use of filters selecting objects for display*").

Regarding claim 9, Jordan/Harnsberger teaches an application tool set operable by said user to input said timeframe, wherein said user can select timeframe increments corresponding to said start properties and said stop properties of said selected ones of said RDF statements (see Jordan column 10 line 58 through column 11 line 4; "*The style of playback may be continuous (if data was collected continuously), interpolated (to create a continuous appearance), or discrete*", "continuous" and "discrete" are two timeframe increments of playback).

Regarding claim 10, Jordan/Harnsberger teaches a method of displaying graphical representations of time varying information for RDF statements from at least one Semantic Web resource (see Jordan column 11 lines 31-45; "*Task objects begin with a set of predefined properties, which may be extended by a user. The predefined properties include start and stop dates (which may include times)*" ; see also Harsberger paragraph [0012]; "*Most of the existing work on developing the "semantic web" has focused on finding ways to express relationships between existing resources (i.e., content). This has led to the development of the Resource Description Framework ("RDF") and the RDF Schema ("RDFS") as forms for expressing relationships and semantic metadata. RDF is a general framework used for describing metadata and provides interoperability between applications that exchange machine-understandable information*"), comprising: receiving a query to retrieve selected ones of said RDF statements matching said query (see Jordan column 8 lines 15-36; "*A user may create,*

modify, and query the database records. Some fields and records contain information generated by graphical interface operations, such as the placement or moving of an object, and are created implicitly and normally hidden from the user in the database interface display. Database records associated with an object are accessible through database commands in the system menu or through a hypertext-like link that appears when a displayed object is opened"); determining said selected ones of said RDF statements from said at least one Semantic Web structured resource (Jordan's invention teaches all the features of a Semantic Web structured resource. See Response to Arguments section below); obtaining start and stop properties for subjects and objects of said selected ones of said RDF statements, said start and stop properties defining lifetimes of said RDF statements (see Jordan column 11 lines 31-45; "*Task objects begin with a set of predefined properties, which may be extended by a user. The predefined properties include start and stop dates (which may include times)"*); determining graphical representation data for said selected ones of said RDF statements and said properties (see Jordan column 11 lines 46-52; "*In the task time line window 92, the system provides for a user to view the information presented in the task diagram in the form of a time line*"); filtering said graphical representation data to control a display to present graphical representations of said selected ones of said RDF statements (see Jordan column 8 lines 15-36; "*When the map editor 20a displays a map, the database information can be referenced by filters to control whether and how objects are displayed*"); and controlling the display to hide said graphical representations of determined ones of said RDF statements when lifetimes of said

determined ones of said RDF statements exclude a selected timeframe (see Jordan column 10 lines 59-67; "*The map and relationship editors also provide for the playback of data (observations) to show their temporal aspects. In a time sequential playback, objects or relationships are placed or changed according to their properties through a selected period of time*"; see also Jordan column 11 lines 11-22; "*All displays, including those just described, may be controlled through the use of filters selecting objects for display*").

Regarding claim 11, Jordan/Harnsberger teaches a computer-readable medium comprising instructions for controlling a processor to associate a lifetime with a RDF statement by: implementing a start property for said RDF statement denoting a start time when said RDF statement becomes valid (see Jordan column 11 lines 31-45; "*Task objects begin with a set of predefined properties, which may be extended by a user. The predefined properties include start and stop dates (which may include times)*" ; see also Harsberger paragraph [0012]; "*Most of the existing work on developing the "semantic web" has focused on finding ways to express relationships between existing resources (i.e., content). This has led to the development of the Resource Description Framework ("RDF") and the RDF Schema ("RDFS") as forms for expressing relationships and semantic metadata. RDF is a general framework used for describing metadata and provides interoperability between applications that exchange machine-understandable information*"); and implementing a stop property for said RDF statement denoting a stop time when said RDF statement ceases to be valid, a time interval between said start time and said stop time denoting said lifetime of said RDF statement

(see Jordan column 11 lines 31-45; "*Task objects begin with a set of predefined properties, which may be extended by a user. The predefined properties include start and stop dates (which may include times)*").

Regarding claim 13, Jordan/Harnsberger teaches instructions for controlling a processor to display a plurality of said RDF statements on a display by: displaying subjects and objects of said RDF statements as nodes (see Jordan column 9 lines 15-20; "*The term graph is used in a fully general sense to refer to any number of nodes (e.g. boxes, ovals, icons) connected by any number of lines (or arcs). Nodes may represent people, artifacts, tasks, and so on; lines indicate the relationships between or among them. Nodes and lines are both objects*"); displaying predicates of said RDF statements as arcs connecting said nodes (see Jordan column 9 lines 15-20); and hiding said nodes and said arcs for particular ones of said RDF statements when a selected display timeframe is outside said lifetimes of said particular ones of said RDF statements (see Jordan column 10 lines 59-67; "*The map and relationship editors also provide for the playback of data (observations) to show their temporal aspects. In a time sequential playback, objects or relationships are placed or changed according to their properties through a selected period of time*"; see also Jordan column 11 lines 11-22; "*All displays, including those just described, may be controlled through the use of filters selecting objects for display*").

Regarding claim 15, Jordan/Harnsberger teaches that the instructions further comprise instructions for controlling a processor to display a toolset operable by a user to select said timeframe (see Jordan column 10 lines 59-67; "*The map and relationship*

editors also provide for the playback of data (observations) to show their temporal aspects. In a time sequential playback, objects or relationships are placed or changed according to their properties through a selected period of time").

Regarding claim 16, Jordan/Harnsberger teaches that the instructions further comprise instructions to control a processor to display a toolset operable by a user to select a start timeframe corresponding to an earliest one of said start properties of said RDF statements (see Jordan column 11 lines 31-45; "*Task objects begin with a set of predefined properties, which may be extended by a user. The predefined properties include start and stop dates (which may include times)*").

Regarding claim 17, Jordan/Harnsberger teaches that the instructions further comprise instructions to control a processor to display a toolset operable by a user to select an end timeframe corresponding to a latest one of said stop properties of said RDF statements (see Jordan column 11 lines 31-45; "*Task objects begin with a set of predefined properties, which may be extended by a user. The predefined properties include start and stop dates (which may include times)*").

Regarding claim 18, Jordan/Harnsberger teaches that the instructions further comprise instructions to control a processor to display a toolset operable by a user to select at least one timeframe increment for displaying said RDF statements in temporal order corresponding to said start properties and said stop properties of said RDF statements (see Jordan column 10 line 58 through column 11 line 4; "*The style of playback may be continuous (if data was collected continuously), interpolated (to create*

a continuous appearance), or discrete", "continuous" and "discrete" are two timeframe increments of playback).

Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan (5,745,113) *supra*, Harnsberger (2004/0107118) *supra*, and Kram et al. (hereinafter Kram), United States Patent number 4,754,326.

Regarding claim 2, Jordan/Harnsberger teaches all the limitations of claim 2 except that hiding comprises painting said nodes and arcs for said particular ones of said RDF statements to match a background of said display. Kram teaches a method of hiding text in a display by painting the text color to match the background (see Kram column 21 lines 38-49; "*answers to a quiz could be " hidden" from the user by sending them to the terminal using the same color for the text as the background color*"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to hide display objects as taught by Jordan/Harnsberger by painting them to match the background of the display as taught by Kram for the purpose of hiding objects from view when they are not needed.

Claim 14 recites a computer readable medium with substantially the same limitations as the method steps of claim 2. Therefore, claim 14 is rejected under the same rationale.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan (5,745,113) *supra*, Harnsberger (2004/0107118) *supra*, and Carroll, United States Patent Application Publication number 2004/0098670.

Regarding claim 12, Jordan/Harnsberger teaches all the limitations of claim 12 except instructions for controlling a processor to implement said start property and said stop property as a datatype taken from a listing of XML Schema Datatypes including an xsd:dateTime datatype, an xsd:date datatype and an xsd:gYear datatype. Carroll teaches a method of canonicalizing an RDF graph according to the rules in XML Schema datatypes (see Carroll paragraph [0051]; "*For each typed literal in the graph canonicalize it according to the rules in XML Schema datatypes*"). It would have been an obvious design choice to one of ordinary skill in the art at the time the invention was made to use XML Schema datatypes as taught by Carroll with the invention of Jordan/Harnsberger for the purpose of providing a standard schema structure for use in RDF statements.

Response to Arguments

Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection. Newly applied prior art Harnsberger (2004/0107118) *supra* teaches the use of Semantic Web resources and RDF statements to build ontologies. Harnsberger also provides teaching of using an API.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Alvesteffer whose telephone number is (571)270-1295. The examiner can normally be reached on Monday-Friday 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Bashore can be reached on (571)272-4088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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